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DETROIT

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

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First Copy

Willys Offers a Four at $395; Six at $595 Olds Shows Many Changes in 6's and 8's

Body Styling Ultra Modern

Fisher No-Draft Ventilators On Closed Car Models

INCREASED POWER IS OFFERED IN NEW SIX

New Engine Mounting Reduces Vibration in Both Lines

Lansing, Mich., Jan. 4.—Oldsmobile today announced its new models for 1933. The two lines, a six and an eight cylinder chassis, are continued with numerous improvements and refinements. The change which will first strike the eye is in the body styling of these new models. The cars give a general impression of lowness, with the lines sweeping from a sloping radiator grill to a curved rear quarter. All the closed bodies carry the Fisher no-draft ventilation system, which Automotive Daily News described in detail some time ago.

In the six-cylinder line the power of the engine has been lifted by increasing the bore. The bore and

(Continued on Page 3)

CONFERENCE BOARD SURVEYS BANKING

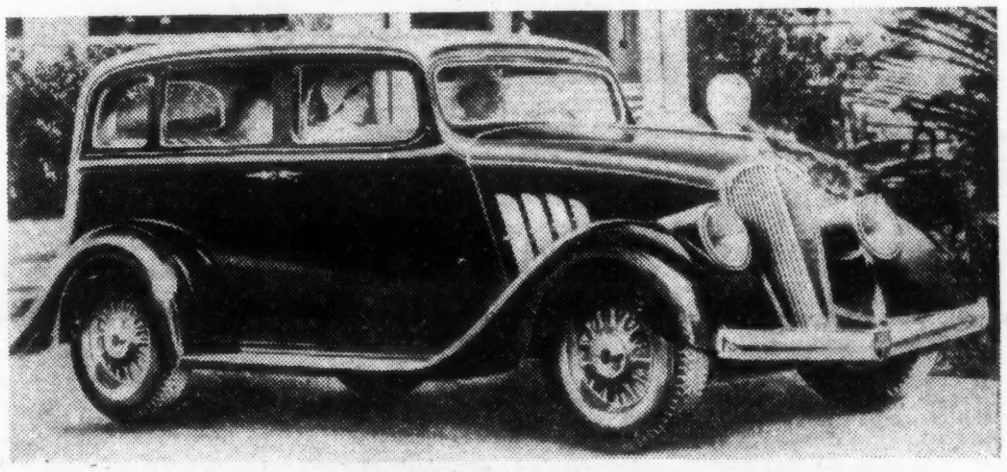
New York, Jan. 4.—The National Industrial Conference Board has announced the publication of a comprehensive study of the availability of bank credit. The study was made by the research staff of the Conference Board at the invitation of members of the banking and industrial committee of the New York Federal Reserve District, and has been in progress since early in the summer.

Excepi so far as facts drawn from

(Continued on Page 4)

RUBBER SHIPMENTS IN 1932 SHOW DECLINE

New York, Jan. 4.—Crude rubber shipments from Malaya, the foremost producer, amounted to 40,153 tons during December, the Rubber Exchange of New York was advised by cable. This compared with 40,098 tons during November and 35,741 tons during December, 1931. For the year 1932 Malayan shipments totaled 478,297 tons, compared with 519,740 tons during 1931.



NEW WILLYS 77 Sedan, Showing the Striking Streamlines of the Four-Cylinder Car Which Sells at the Lowest Price in Willys History

ILLINOIS TRUCK REGISTRATIONS UP 44% IN DECEMBER

New York, Jan. 4.—New commercial car registrations in Illinois during December showed an increase of approximately 44 per cent. over the figures for the corresponding month in 1931, and approximately the same gain over the previous month last year, the actual figures being 480 units for December, last year, as against 271 units in December a year ago.

Oddly enough, the commercial car sales in Illinois for November, last year, fell only one unit short of the total for December, 1931, with a total of 270 units. They were considerably below the November figures of a year ago, however, when 536 units were registered in the state.

New passenger car registrations in Illinois during December ran about 20 per cent. behind the month of November, according to the final figures for the month, announced today by the Robinson Advertising Service, the actual figures being: November, 1,804 units, against 1,432 units in December.

(Continued on Page 8)

Oldsmobile 6

Business Coupe	$745
5 P. Coupe	745
Sport Coupe	780
Sedan	825
Touring Coupe	775
Conv. Coupe	825
Touring Sedan	855

Oldsmobile 8

Business Coupe	$845
5 P. Coupe	845
Sport Coupe	880
Sedan	925
Touring Coupe	875
Conv. Coupe	925
Touring Sedan	955

WILLYS OVERLAND INCREASES FORCE

Toledo, Jan. 4.—Willys-Overland increased its force of workers to 6,300 today as production on the new 1933 models and the International Harvester half-ton trucks began.

The rate of production is expected to increase steadily from now on. Old employees are being called back first.

N. A. C. C. MEETING TO HEAR TALKS ON FOREIGN MARKETS

New York, Jan. 4.—"Export Preparedness" will be the theme of a meeting of export managers of American automobile companies to be held Tuesday, January 10, at the National Automobile Chamber of Commerce, 366 Madison Avenue, New York.

The first section of the session will be devoted to reviewing trade conditions in various sections of the world, according to Robert C. Graham, chairman of the chamber's export committee.

Among those who will speak or lead discussions of topics at this session are:

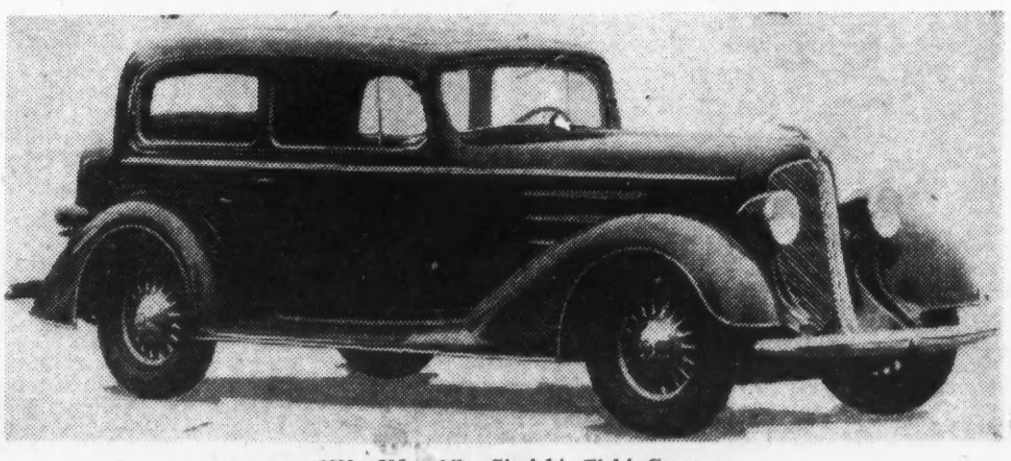
Franklin Johnston, editor, American Exporter—"General Review of Export Markets."

R. J. Archer, vice-president, Willys Export Corporation—"The Automotive Situation in South America."

A. L. Frank, vice-president, Studebaker Pierce-Arrow Export Corporation—"European Markets for Automotive Products."

E. C. Morse, president, Chrysler

(Continued on Page 8)



1933 Oldsmobile Straight Eight Coupe

Willys Adopts Floating Power

Ultra Streamline Bodies on Full Size Chassis Featured

LAMPS RECESSED IN NEW SKIRTED FENDERS

Overall Length of Four 156 Inches; Six Measures 174 Inches

Toledo, Jan. 4.—Two entirely new cars, a four and a six, with "floating power" and streamlined bodies of of novel design, will be included in the 1933 Willys line. The four, with a base price of $395, will be the lowest price car of its size on the American market, and the six, at $595, is well within the lowest price brackets.

Besides boasting bodies of advanced design, the new models have new floating power units, X-type frames of double-drop design, hydraulic shock absorbers, headlamps recessed into skirted fenders and cable-controlled Bendix brakes on embossed-spoke disk wheels. Wheelbase and track measurements are not announced, but overall lengths of the two models are given at 156 and 174 inches, respectively, for the four and six. The former is credited with making 25 to 30 miles per gal-

(Continued on Page 5)

NASH MOTORS CO. MEETING JANUARY 9

Chicago, Jan. 4.—The annual meeting and directors' meeting of Nash Motors Company will be held in New York on January 9, when annual report will be released and action taken on the dividend, now 25 cents quarterly.

The company is expected to report in the black for its fiscal year ended November 30, 1932, despite fourth quarter expenses incurred in preparation for its new 1933 line of cars. For nine months ended August 31, Nash reported a net income of $718,189 after charges and taxes, equal to 26 cents a share on 2,730,000 no par shares of stock.

REO STOCKHOLDERS APPRO REDUCTION OF STOCK VALU

Lansing, Mich., Jan. 4.—Reo Motor Car Co. stockholders have approved a reduction in the par value of the company's stock from $10 to $5 a share, officials announced December 29. The capitalization is reduced from $20,000,000 to $10,000,000 by the action.

NOVEMBER CAR FINANCING OFF IN CANADA

Montreal, Jan. 4.—The figures for automobile financing compiled by the Dominion Bureau of Statistics show a decrease in November, 1932, as compared with October, 1932, and indicate a falling off in financing as compared with the corresponding month in 1931. The per cent. of change is 37.8 lower.

The total number of cars financed was 4,286 in November, 1932; 4,361 in October, 1932, and 5,162 in November, 1931, and the amount involved was $1,334,307 in November, 1932; $1,583,215 in October, 1932, and $2,145,593 in November, 1931.

New cars financed were 1,166 in November, 1932; 1,259 in October, 1932, and 1,303 in November, 1931, while used cars financed were 3,120 in November, 1932; 3,102 in October, 1932, and 3,859 in November, 1931.

Financing of new cars amounted to $538,264 in November, 1932; $719,787 in October, 1932, and $980,252 in November, 1931. Financing of used cars amounted to $796,043 in November, 1932; $863,428 in October, 1932, and $1,165,341 in November, 1931.

FEDERAL AID ROAD BUILDING IN 1932 SET NEW RECORD

Washington, Jan. 4.—Improvement of Federal aid roads during the last fiscal year set a new high record, the total mileage improved in the year being 16,000, and the Federal provision of emergency road construction funds was instrumental in raising the number employed on road building in the United States to a peak of 389,949 in August of 1931, the bureau of public roads, Department of Agriculture, stated in its annual report recently made public.

While employment on roads during the first six months of 1932 has been below the high level, it has been consistently far above the level of early 1931, the bureau said. This was an indirect effect of the Federal emergency appropriations, which enabled the states to save their own funds for use after the emergency appropriations were exhausted, the bureau said.

FORD MILWAUKEE PLANT PLANS DEPEND ON ORDERS

Milwaukee, Wis., Jan. 4.—The plans for 1933 of the Ford assembly unit here have not, as yet, been decided on, according to W. E. Simons, general manager. According to Mr. Simons, the immediate future of the factory in this city will depend largely on how orders come in during the next few months.

It is probable that assemblies will be concentrated in the more modern and conveniently located plants. Chicago will probably cover this territory. Although assembling of cars has been discontinued here at least for the time being, about 150 men are still at work in the repair parts department.

FINANCIAL NEWS

WILCOX OIL

New York, Jan. 4.—H. F. Wilcox Oil and Gas and wholly owned subsidiaries for nine months ended September 30 show net loss of $265,532 after interest, taxes, abandonments, depreciation, depletion, etc., comparing with net loss of $718,862 in the first nine months of the previous year. For the quarter ended September 30 net loss was $269,163 after above charges against net loss of $44,741 in the preceding quarter and net loss of $156,625 in the September quarter of 1931.

COMMODITY PRICES

New York, Jan. 4.—Bradstreet's index of wholesale commodity prices stood at $6.7906 on January 1, off 1.4 per cent. from the total of December 1. On January 1, 1932, the index stood at $7.7325. This decline, combined with one of 1.2 per cent. in November and one of 4.3 per cent. in October, brought the index within a small margin of entering the new year at a new depression low.

SOCONY-VACUUM

New York, Jan. 4.—James J. Maguire has been elected president of Socony - Vacuum Transportation Company, succeeding George D. Ali, resigned. Mr. Ali, who became eligible to retire under the company's pension plan will continue as a director. Mr. Maguire formerly was vice-president.

GAS PRICES

New York, Jan. 4.—With Consolidated Oil Corporation (Sinclair) taking the initiative, retail gasoline prices were slashed 1 cent a gallon yesterday throughout the entire country east of the Rocky Mountains. From the viewpoint of territory covered, the cut was one of the most sweeping in the history of the oil industry. Four large marketing companies competing at various points with Sinclair had last night announced acceptance of the new lower quotations, the principal being Standard Oil Company of New York, which has a widespread organization in New York and New England. It is the second price cut on gasoline posted by Socony within a month. Virtually all oil marketers either have met or are expected to meet the new prices.

PETROLEUM OUTPUT

New York, Jan. 4.—Reflecting the shutdown in East Texas, the daily average gross crude oil production in the United States declined 327,550 barrels in the week ended December 31. The daily average for the period, according to the American Petroleum Institute's weekly report, was 1,698,150 barrels. Daily average production east of California decreased 326,450 barrels to a daily rate of 1,225,550 barrels.

In addition to the East Texas reduction from 283,450 barrels a day to nil, Oklahoma reported a drop of 40,550 barrels a day in crude output.

API SESSIONS SET FOR MAY IN TULSA

New York, Jan. 4.—The mid-year meeting of the American Petroleum Institute for 1933 will be held at the Mayo Hotel in Tulsa May 17, 18 and 19.

PHILADELPHIA SHOW EXHIBITORS NAMED

Philadelphia, Jan. 4.—The names of exhibitors at the thirty-second annual Automobile Show, to be held in Convention Hall the week of January 16, and the products they represent are, to date, as follows:

Automobiles—Auburn Sales Company of Philadelphia, Auburn and Duesenberg; Buick-Oldsmobile-Pontiac Sales Co., Buick Division, Buick; Oldsmobile Division, Oldsmobile; Pontiac Division, Pontiac; Griscom Motor Co., Austin; Cadillac Motor Car Co., Cadillac and La Salle; Chevrolet Motor Co., Chevrolet; Chrysler-Philadelphia Co., Chrysler; De Soto Motor Corporation, De Soto; Thornton-Fuller Automobile Co., Dodge; Ford Motor Co., Ford; Townsend Motor Co., Franklin; Guy A. Willey Motor Car Co., Graham; Gomery-Schwartz Motor Car Co., Hudson Terraplane; Ralph W. Cook, Inc., Hupmobile; Foss-Hughes Co., Lincoln; Marmon Philadelphia Co., Marmon; Nash Philadelphia Co., Nash; Packard, Inc., Packard; Johnston Pierce-Arrow, Inc., Pierce-Arrow; Plymouth Motor Coroporation, Plymouth; Reo Sales & Service of Philadelphia, Inc., Reo; Teefy-Seltz Co., Inc., Studebaker and Rockne; Stutz-Philadelphia, Inc., Stutz; Willys-Overland of Pennsylvania, Inc., Willys-Overland.

Accessories and Equipment.—H. P. Schade; Jiffe Co.; Lacy L. Redd & Co., Inc.; Dickel Distributing Co.; Electro Products Co., New York city; Major Petroleum Co.; Simplicity Mfg. Co., Port Washington, Wis.; Earl Mylecraine; R. C. Wall Mfg. Co.; Keystone Lubricating Co. and Motor Parts Co.

NEWARK, N. J., SHOW TO EXHIBIT 125 CARS

Newark, N. J., Jan. 4.—With a galaxy of more than 125 new cars and chassis, representing twenty-three different makes of automobiles, and, according to the latest announcement, a number of commercial automobiles, the Newark Automobile Show will open at the Sussex Avenue Armory, January 14, under the auspices of the New Jersey Automobile Exhibition Company, with Claude E. Holgate as manager.

The cars that will be exhibited are Auburn, Buick, Cadillac, Chevrolet, Chrysler, De Soto, Dodge, Essex, Franklin, Graham, Hudson, Hupmobile, La Salle, Marmon, Oldsmobile, Packard, Pierce-Arrow, Plymouth, Pontiac, Reo, Rockne, Studebaker and Willys.

IRELAND ENDS PREFERRED TARIFF ON BRITISH CARS

Washington, Jan. 4.—Preferential tariff treatment on automobiles imported from the United Kingdom has been abolished by the Irish Free State government under an executive order according to a cablegram received in the Department of Commerce from the United States Consulate in London.

This act marks another step in the development of commercial antagonism founded in the political difficulties of the Irish Free State and Great Britain. These goods when imported from the United Kingdom now become subject to the rates of the general tariff and presumably also to the special duties imposed on July 26 against certain imports from the United Kingdom, including iron and steel and manufactures thereof.

HUDSON-ESSEX EXPORTS FROM CANADA INCREASE

Toronto, Canada, Jan. 4 (UTPS).—Steady increase in exports of Hudson and Essex cars manufactured at the plant of Hudson-Essex of Canada, Ltd., at Tilbury, Ont., is reported. A large percentage of these shipments of cars are going to Britain, and also shipments to Spain.

Thirty-two other Canadian companies, who manufacture parts and material entering into the production of Hudson and Essex cars, also are enjoying increased business as a result of orders received from the Hudson-Essex company.

AUTO SHOW

See What's New at This Great Show!

Cars, Accessories, Commercial Vehicles — Hundreds of innovations for 1933 — Never before such car values — Adm. 75c.

January 7—14 10 A. M. TO 10.30 P. M.

(Sunday Excepted)

OPENS SATURDAY AT 2 P. M.

GRAND CENTRAL PALACE

SPARKS *from* DETROIT

Safety Glass

* * *

Ford Picks V-8

* * *

Fisher Number 16

* * *

Father Ewald

* * *

Chris Sinsabaugh—Detroit Editor

IN 1933 the wind shields on all American-made automobiles will be safety glass and standard equipment, is the most interesting statement made to me by Byran Warman, an executive of the Libbey-Owen-Ford company of Toledo, which has been most prominent in pioneering this movement.

This seems proof conclusive that the industry is 100 per cent. back of this movement. It's taken time to bring this about, but shatter-proof glass is something that cannot be laughed off by even the economically-minded manufacturer.

* * *

IT IS ESTIMATED that in 1932 about 50 per cent. of the product either fitted safety glass as standard or optional. Even those companies not using it as standard did not hesitate to urge their dealers to deliver safety-glassed cars wherever possible, because the additional cost only was around $15 or $16.

Others than automobile manufacturers can see the sense of safety glass. We know this because of world-wide legislation that is going on. Great Britain has taken a firm stand in the matter and in another two years all motor vehicles will be thus equipped in the United Kingdom.

On this side of the water we find Michigan and Massachusetts with laws calling for safety glass. Michigan gives us two more years in which to bring about the universal use of safety glass. California beat a measure of this sort because it did not give owners enough time to get set to make the change, but it is said there is another bill under consideration which will care for this and it is believed California soon will take decisive action.

* * *

EVEN HENRY FORD has been unable to resist the crave for license plates that have particular significance for the one asking for them. In the case of the sage of Dearborn he wanted Michigan V-8. I don't have to tell you why—it speaks for itself. Unfortunately Thomas A. Smith, a county surveyor in Van Buren county, had copped V-8, but certain wires were pulled and we now note that these tags have been transferred and Henry Ford himself will carry them on his personal car.

Others have this same sort of a yen. When I was at the Cadillac preview the other day I saw standing in the factory's parking space the personal car of President Larry Fisher. You guessed it—a V-16—and the plates were "16" and without a preceding letter.

* * *

LOOKING AT A V-16 on the assembly line, Volney Fowler of General Motors' public relations Detroit staff, who formerly was with the export division, told me that in Germany V-16's have to carry truck tags. This isn't any slam at the car, but German regulations are based on weight. Above a certain weight all motor vehicles must use truck tags.

* * *

CARRYING OVER from yesterday's column and the Chapin luncheon I cannot resist telling of the wisecrack handed Henry T. Ewald by Harvey Campbell, executive head of the Board of Commerce. It was Harvey's job to introduce the wax works figures at the speakers' table. When he came to Ewald he referred to him as the father of the Adcraft Club and told of the club's old timers' party of a couple of weeks back when a portrait of Ewald was presented to the club. Ewald was not present, being on his way to Los Angeles.

Referring to the trip to the coast, Campbell facetiously spoke of the big agency man as "Our father who art in Los Angeles, Hollywood be thy name."

* * *

OF COURSE, turning into the new year, the motor magnates were asked for statements as to the outlook. Alvan Macauley, president of Packard and also the N. A. C. C., took advantage of this opportunity to drive home several impressive points.

New Olds Lines Offer Body and Chassis Changes

(Continued from Page 1)

stroke of the six power plant are now 3⅜ by 4½. This brings the piston displacement up from 213 to 221 cubic inches. The taxable horsepower is now 27.34, against 26.3. The engine now develops eighty horsepower at 3,200 r. p. m. The standard compression ratio is 5.3 to 1. The standard compression pressure is 104 to 107 pounds at 1,000.

The eight-cylinder power plant has not been altered as to size, but various refinements are said to have lifted the brake horsepower to ninety at 3,200 r. p. m.

The outstanding change in the Oldsmobile power plants is the engine mounting. The engines are now suspended at three points through non-adjustable, wear-proof, cushion mountings. The front support is a large pad of rubber seated on the front cross-member. This cross-member is high, the support for the engine being just below the water pump and is cut out for clearance for the timing chain housing.

The two rear supports are placed below the clutch housing. They are set at an angle of 45 degrees. These supports are, Olds engineers state, in effect segments of a circular track or cradle in which the power plant rests as on runners. The rubber in the mountings is confined so that the only movement permitted is along this track or in a rotational direction. This permits the engine to oscillate slightly under torque action, a feature designed to decrease vibration.

New connecting rod bearings are used in these engines. These parts have a thin babbitt wall bound to an outer shell of steel or bronze. The bearings are interchangeable and can be removed and replaced without taking out piston and rod assembly.

Several changes have been made in the carburetion system, with the design of aiding starting and promoting economy. The float needle valve has been placed in a horizontal position to prevent gasoline from draining back through the fuel pump to cause hard starting. The high speed jet of the carburetor has been placed above the gas level to prevent gas leaking into the intake manifold.

The automatic choke used last year is retained with improvements. The two principal changes consist of a more accurate control of the position of the carburetor choke valve to give more efficient engine operation, and automatic regulation of the engine idling speed.

In the choke now used the single stage carburetor disc lock-up is superseded by a two-stage, hardened cam notch arrangement. The movement of the carburetor choke disc control linkage to the first notch opens the disc sufficiently to bring about easy starting in cold weather. The second notch permits a small additional opening to the choke disc and thereby prevents hard starting because of too lean a mixture. Beyond this point the choke disc is controlled by a thermostatic coil.

Another automatic feature incorporated on the new Oldsmobiles is the thermostatic water temperature control. By means of two valves the water circulates through the engine only until its temperature reaches 145 degrees. One valve is of the bellows thermostatic type and is located in the cylinder head outlet casting. The second valve is of the spring loaded by-pass type and is fitted to the top of the water pump body. When the thermostat valve is closed pressure created by the water pump forces open the spring by-pass valve and the water recirculates through the engine block until it is brought up to the proper temperature again. Owing to this development and the use of a radiator grill, radiator shutters have been discontinued.

Other engine improvements include the fan and the valve lifter and cam arrangement. The fan speed has been slowed considerably without, it is stated, impairing the efficiency of the cooling system. Changes in cam contours have been made to add to engine quietness.

A double kick-up frame with X-type cross member is used. The X-type cross member has its front ends carried forward along the sides of the frame and then they curve together in from the engine and meet in the center of the front cross member under the radiator. This construction is designed to reduce torsional twisting and to add considerably to front end stability.

A new brake hook-up consists of a short cross shaft located between the front ends of the X-cross member. From this shaft cables run in a direct line to the brakes in an X-shape, hooking together the right front and the left rear brakes and the left front and right rear. The brake cam and lever construction also has been improved.

The six cylinder has a worm and three-toothed sector steering system, the shaft of which has bi-metal bushings designed to reduce friction of the pitman arm shaft. The eight has a worm and double roller steering gear. Kick shackles are used on both cars this year and are located on the forward end of the front left spring. Double action Delco-Lovejoy hydraulic shock absorbers are standard.

The free wheeling unit has been eliminated with a return to standard shifting, but provision has been made for the installation of a vacuum automatic clutch at small additional cost. Necessary holes have been bored in the frame for the quick and easy installation of the unit. A quiet second syncro-mesh transmission is used.

The body styling of both the Oldsmobile six and eight is entirely new throughout, with particular emphasis on the sheet metal treatment. The radiator grill is composed of slender chromium bars arranged in herringbone style. The grill is V-shaped with a slight forward curve at the base.

The radiator shell is Ducoed to match the body color and has a fine chromium molding outlining its inner edge. It is surmounted with a cromium band that carries the V-line of the grill upward to connect with the chromium hood hinge. The filler cap has been placed under the hood.

The hood louvres consist of three torpedo shaped horizontal doors that taper toward the rear.

The use of this Fisher ventilation system has eliminated the VV windshield and the windshield glass has been deepened to improve vision. A screened cowl ventilator is included for use in extremely hot weather. The windshield wiper mechanism is concealed in the header bar.

The instrument panel is in walnut finish and has but two dials and two controls, grouped in the center. The dials are of large size. One is an aviation type speedometer. The other is of the same size and is divided into four segments, one of each being devoted to the ammeter, engine temperature, oil pressure and gasoline gage. The two controls consist of hand throttle and lights. A light dimmer switch is located on

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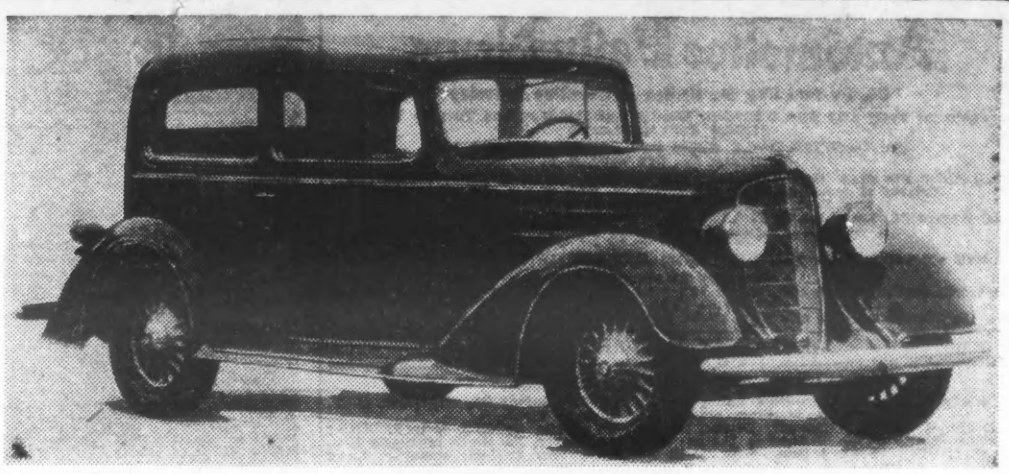
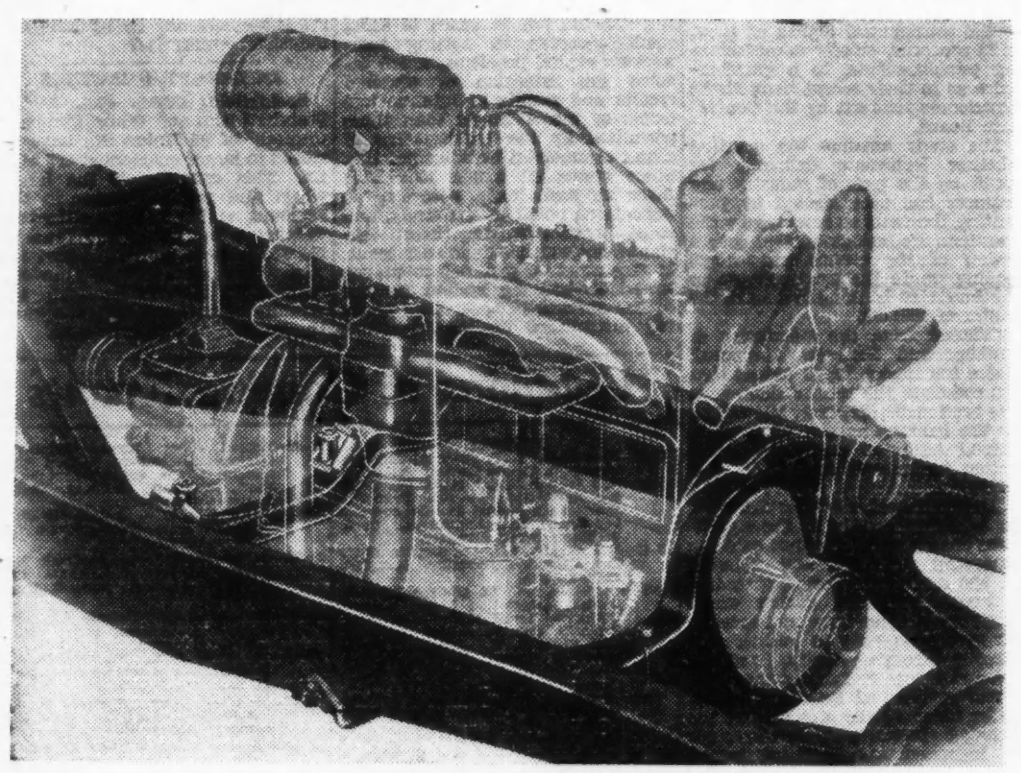
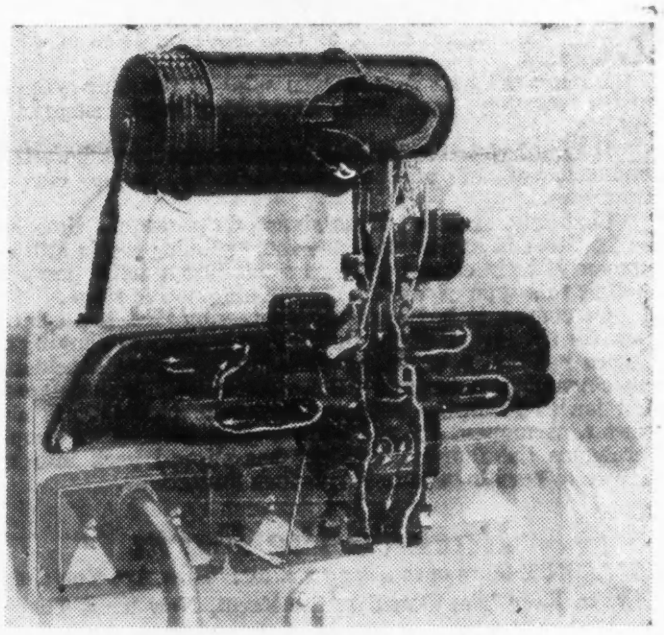


1933 Six-Cylinder Oldsmobile Coupe



Engine Mounting on Oldsmobile 6 and 8



MANIFOLDING System of 1933 Oldsmobile Six

Cumulative New Passenger Car Registration Statistics, December, 1932

States	AUBURN GROUP			CHRYSLER GROUP					FORD GROUP			GENERAL MOTORS GROUP						
	Auburn	Cord	Totals	Chrysler	De Soto	Dodge	Plymouth	Totals	Ford	Lincoln	Totals	Buick	Cadillac	Chevrolet	La Salle	Oldsmobile	Pontiac	Totals
Illinois	10	1	11	37	29	73	372	511	296	14	310	51	19	200	20	20	45	355
Illinois, 1931	39	7	46	53	40	54	139	286	448	13	461	240	51	623	40	82	94	1130

States	HUDSON GROUP			STUDEBAKER GROUP				WILLYS-OV-R-D GR'P			NON-AFFILIATED MANUFACTURERS									State Totals
	Essex	Hudson	Totals	Pierce-Arrow	Rockne	Studebaker	Totals	Willys-Overland	Willys-Knight	Totals	De Vaux	Franklin	Graham	Hupmobile	Marmon	Nash	Packard	Reo	Miscellaneous	
Illinois	45	3	48	7	20	23	50	29	2	31		9	18	9	1	28	36	12	3	1,432
Illinois, 1931	42	19	61	11	*	47	58	73	10	83	4	14	22	17	19	61	61	9	57	2,389

*Not in production.

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

Published Every Day Except Sunday, Monday and Holidays, and Tuesday When a Holiday Falls on Monday

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The Four Came Back

FOR lo, these many years, prophets of varying degrees have been predicting the passing of the four-cylinder automobile. These prognosticators have pointed out the inherent weaknesses of the four-cylinder engine; its lack of certain features of performance and convenience that the American motoring public has come to expect. We who have been in the automotive publication field for many years have watched the gradual decline in number of the four-cylinder cars and have expected, year after year, to see this type of power plant make a graceful exit from the automotive stage.

In 1931 there were only three entrants in the four-cylinder class—Plymouth, Austin and Ford, which latter carried its four as a sort of tail to the eight-cylinder kite for a limited buying field. When Plymouth announced its transfer to the six-cylinder field it seemed as if the ancient prediction were near accomplishment.

But with the opening of the 1933 period, if not actual calendar year, the four-cylinder automobile is seen to be very much back in the picture. Ford will retain its four-cylinder line for various types of buyers. And replacing Plymouth in this class comes Continental, with a full-sized motor car powered with a four-cylinder engine and marketed in a new fashion direct from factory to ultimate consumer. No one yet can tell what will be the effect of this move on sales of four-cylinder cars.

During the past few months sales of the four-cylinder Austin Bantam have been increasing with surprising rapidity.

It is not violating any confidence to interject here that announcement of another four-cylinder motor car is impending.

Certainly, from all these signs of the present time, we are justified in saying that the four-cylinder car is still an extremely lively corpse. We were all just a trifle hasty in reading this type of vehicle off the automotive stage.

Of course, it has been the depression that has set the stage for the revival of the four. People today are buying on a price basis who would, three years ago, have considered only convenience or luxury. But it often happens that depression leaves behind it deep marks of its passing. It may exert a permanent effect on the buying habits of a people. Perchance the four-cylinder car has slipped back into the picture to remain, within its obvious limitations.

Back to the Farm

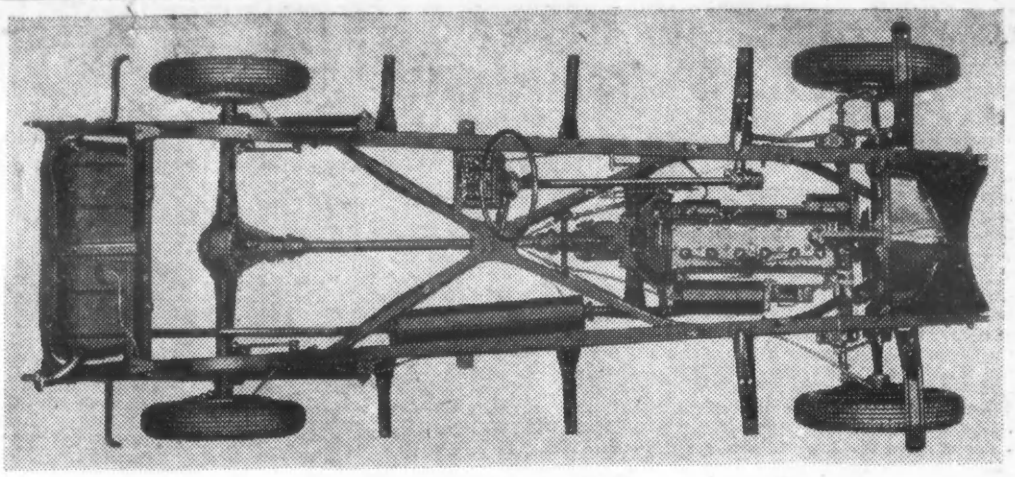
WASN'T there once a song asking: "How Are You Going to Keep 'Em Down on the Farm, Now That They've Seen Paree?" The answer seems to be: "Have a depression."

The Bureau of Agricultural Economics has just published an estimate that the farm population of the United States in 1932 was approximately 32,000,000 people. This approaches, and indeed it may exceed, the peak of this condition which existed in 1910, when the farm population reached 32,077,000 souls.

During the decade between 1920 and 1930 there was a decrease in the farm population of about 1,500,000. Every farm boy and farm girl who could break home ties swarmed into the city to find a freer, fuller life. The decrease in farm population became a serious problem.

Then, as the old-time movies would have said, "came the depression." For three long years employment in the cities has grown more and more difficult to get. The farm boys and farm girls, who viewed the city as a golden area of opportunity in 1929, see a different picture from the bread lines of 1932. When they had any place to go, these once bouyant optimists have slipped back to the farm, where there was a square meal once in a while, anyway.

The automotive industry and all other industry must take into consideration the change in buying conditions that this upsurge in farm population will bring with it. We purpose discussing this in greater detail on another occasion.



New Oldsmobile Six Chassis

New Engine Mounting Cuts Vibration in New Olds

(Continued from Page 3)

the floor boards near the clutch pedal.

The wheelbase of the eight cylinder chassis has been lengthened from 115½ to 119 inches. The tread has been increased on both models, so that roomier bodies are the rule. Front tread is now 58½ and rear 60¼. The wheelbase of the six cylinder chassis is now 115, the overall length of the car being 170¾.

CONFERENCE BOARD SURVEYS BANKING

(Continued from Page 1)

general sources are used as aids in interpretation, the treatment of the subject rests entirely on an analysis of the confidential replies of about 3,500 concerns, chiefly manufacturing establishments, to a questionnaire as to their recent bank credit experiences sent out by the Conference Board.

The study answers the question whether legitimate demands for credit on the part of industry and business has been denied by presenting the facts as revealed by the questionnaire, in conjunction with a review of the events and causes leading up to the near-collapse of the American banking system in the winter of 1931-32.

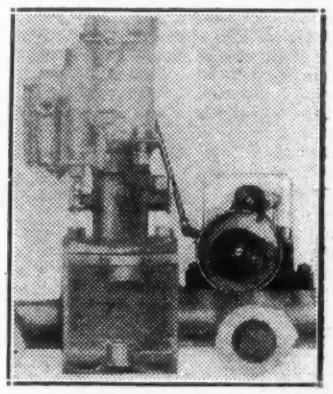
"Viewed from the standpoint of banking and financial statistics," states the report, "it is patent that the course of the present depression has been made deeper by the failure of the banking system at large to extend adequate credit accommodation to industry and trade as a whole."

The explanation of this failure is to be found mainly in the significant changes in the role of banks in financing production and exchange in the seven-year period preceding economic recession, during which bank credit came more and more to be made available to business indirectly through security, fixed asset and consumer loans, rather than direct commercial loans. It is also to be found in the structure of the banking system, with its thousands of independently operating banks, variously organized under national or state charters, with materially differing standards of bank practice but all interdependent in the end.

The effect of these conditions was to impart to a large section of business independence from banks as debtors and to make banking stability hinge more largely on the stability of property and security values. When these values became unstable, banks as going institutions were rendered vulnerable to the caprices of public confidence. Efforts by banks to improve their positions by readjusting their assets, when banking failures became numerous and public confidence wavered, led first to the restriction of credit advanced directly to business and later of credit advanced indirectly through their own investments, loans on securities, loans on real estate, and loans to consumers. Credit restriction led to a further loss of confidence and set in motion a vicious sequence of financial catastrophe.

This assembling and analysis of factual material, hitherto unavailable, naturally leads to an inquiry as to the most effective steps to take in a reorganization of the American banking system looking to the prevention of similar financial collapses in the future. The report, in a chapter on the problem of bank credit reconstruction, states that the re-establishment of credit contacts between banks and their business customers would seem to be the most critical issue in the restoration of conditions under which bank credit may again be made readily accessible to industry and trade.

In view of the fact that the majority of the complaints of bank credit difficulties come from the smaller concerns, the Conference Board states that the question may well be raised whether special measures should not be taken to assist small concerns in solving their working capital problems, which involve the extension of seasonal credits and credits of intermediate terms or terms longer than those permitted by the requirements of sound commercial banking practice. Since banks no longer look with favor on such loans, according to indications noted in the study, and since in strict banking theory they should not widely extend such loans, is there not a real defect in the American banking system because of the absence of specialized banking institutions dealing with this sort of credit, with resources for lending acquired from deposits on a savings or time basis? Should not such institutions be created in response to the exigencies of the present emergency by banking and industrial enterprise?



IMPROVED Automatic Choke Used on 1933 Oldsmobile Six and Eight

IN LARGER QUARTERS

Springfield, Mass., Jan. 4.—The Standard Rim and Wheel Company, formerly of 85 Union St., have removed to larger quarters at 899 Main St. This company is the largest wheel and rim distributor in New England, having its main offices and warehouse in Boston and branches in Providence, Worcester and this city. The Springfield store was opened in September, 1931, and steadily increasing business made the larger quarters necessary.

Calendar of Coming Events

JANUARY

7-14—**New York, N. Y.** National Automobile Show, Grand Central Palace.
7-14—**San Francisco, Cal.** Motor Car Dealers Association of San Francisco seventeenth annual Pacific Automobile Show, Civic Auditorium. G. A. Wahlgren, show manager.
7-15—**Los Angeles, Cal.** Los Angeles Motor Car Dealers Association, twentieth annual show.
8-14—**St. Louis, Mo.** St. Louis Automobile Dealers Association Show, Midwest Industrial Terminal Building. J. A. Schlecht, show committee chairman.
9—**New York, N. Y.** Society of Automotive Engineers, show meeting.
9—**New York, N. Y.** Rubber Manufacturers Association. Meeting.
11—**New York, N. Y.** Society of Automotive Engineers, annual dinner, Pennsylvania Hotel.
14-21—**Toronto, Can.** National Motor Show of Canada, Automotive Building, J. L. Stewart, manager Canadian Automobile Chamber of Commerce, in charge.
14-21—**Cleveland, O.** Cleveland Autmobile Manufacturers and Dealers Association, show. Herbert Buckman, manager.
14-21—**Newark, N. J.** Newark Automobile Dealers Association, show, Armory. Claude E. Holgate, show manager.
14-21—**Milwaukee, Wis.** Milwaukee Automobile Trades, Inc., show. Palmer E. Hanson, manager.
14-21—**Buffalo, N. Y.** Buffalo Automotive Trade Association, show. Albert Hertzog, Jr., manager.
14-21—**Providence, R. I.** Rhode Island Automobile Dealers Association, show, Cranston Street Armory. Ralph P. Lord, manager.
15-21—**Cincinnati, O.** Cincinnati Automobile Dealers Association, show, Music Hall. Harry T. Gardner, manager.
16-20—**Detroit, Mich.** Annual convention and road show.
16-20—**Detroit, Mich.** Highway and Building Congress.
16-21—**Brooklyn, N. Y.** Brooklyn Motor Vehicle Dealers Association, show. Ralph Ebert, manager.
16-21—**Philadelphia, Pa.** Philadelphia Automobile Trade Association, show.
16-21—**Detroit, Mich.** Steel Founders Society of America, annual meeting.
20-28—**New York, N. Y.** National Association of Engine and Boat Manufacturers, boat show, Grand Central Palace.
21-28—**Montreal, Canada.** National motor show of eastern Canada. Stadium Building, Adelstau Levesque, general manager.
21-28—**Boston, Mass.** Boston Automobile Dealers Association, Boston Commercial Motor Vehicle Association, show, Mechanics Building. Chester I. Campbell, manager.
21-28—**Jersey City, N. J.** Automobile Show, Midtown Auto Salon, Frank Galland, manager.
21-28—**Baltimore, Md.** Auto Trade Association of Maryland, show, Fifth Regiment Armory. John E. Raine, manager.
21-28—**Detroit, Mich.** Detroit Automobile Dealers Association, show. H. E. Shuart, manager.
21-28—**Syracuse, N. Y.** Syracuse Automobile Dealers Association show. C. H. Hayes, manager.
2-28—**Hartford, Conn.** Hartford Automobile Dealers Association, show, State Armory. Arthur Fifoot, manager.
22-26—**Detroit, Mich.** Society of Automotive Engineers, annual meeting, Book-Cadillac.
23-28—**Rochester, N. Y.** Rochester Automobile Dealers' Association Show, Edgerton Park, A. C. Lohman, executive secretary.
23-28—**Pittsburgh, Pa.** Pittsburgh Automobile Dealers Association, show. W. N. Owings, manager.
25-28—**Harrisburg, Pa.** Harrisburg Automotive Trade Association, show, New Farm Show Building.
27-Feb. 15—**Cairo, Egypt.** International Salon.
28-Feb. 4—**Portland, Me.** Portland Automobile Dealers Association, show, Exposition Building. L. F. Borman, manager.
28-Feb. 4—**Chicago.** National Automobile Show, Coliseum.
28-Feb. 5—**Washington, D. C.** Washington Automotive Trades Association, show.
30-31—**Chicago, Ill.** National Automobile Dealers Association, convention, Medinah Athletic Club.
30-Feb. 4—**Springfield, Mass.** Automobile show.

FEBRUARY

1-11—**Indianapolis.** Twenty-second annual show, Indiana State Fair Ground.
6-11—**Ottawa, Canada.** Ottawa Automotive Trade Association, show, Coliseum. L. M. McCoy, chairman adv. committee.
6-11—**Denver, Col.** Automobile show.
7-11—**York, Pa.** York County Automobile Dealers Association, Inc., show. R. C. Keller, president.
9-11—**Springfield, Ill.** Springfield Automobile Dealers Association, show.
11-18—**Kansas City, Mo.** Kansas City Motor Car Dealers, show.

New Willys Four Priced $395; Six Priced $595

(Continued from Page 1)

lon and with ability to attain speeds of more than 70 miles an hour. Its 3⅛x4⅜-inch (134.2 cubic inches displacement) engine is reported to develop 48 h. p. at 3,200 r. p. m., and has a 5.13 to 1 compression ratio. It is termed model 77.

The six, termed model 99, has a 3 5-16x4⅛-inch engine of 213.3 cubic inches displacement, and is said to develop 80 h. p. at 3,400 r. p. m. Its compression ratio is 5.26 to 1. It is credited with driving the car at 80 miles per hour.

Bodies on each of the two chassis are identical in general design and appearance, but, of course, differ in size. They have well-rounded corners and contours. D-shaped rear windows and rear panels that slope outward at the bottom and are recessed to receive the spare wheel. Hoods slope sharply forward and have a V-shaped ridge line ending at the top of the V-shaped and forward-sloping radiator grill. There is almost no cowl showing, for the hood ends close to the backward-sloping windshield and has its rear side line and louvre doors similarly sloped.

Fenders present a novel appearance because of the recessed headlamps which they carry and the fact that the lenses for the latter are sloped backward at the top, although the lamps are designed to throw the light beam downward in conventional fashion. Both front and rear fenders have rather deep skirts and their lower line is merged into the bottom line of the steel running boards. Front bumpers are V-shaped and sloped from side to center, thus fitting well into the lines of the car. Although wheels are of disk type, they are embossed to give a spoke-like appearance. Rims are of 17-inch diameter on both cars, the smaller having tires of 5.00-inch and the larger 5.50-inch section. The whole appearance is novel and decidely modern. Lines as a whole come closer to a "true" streamline form, perhaps, than do those of most of the new models thus far disclosed.

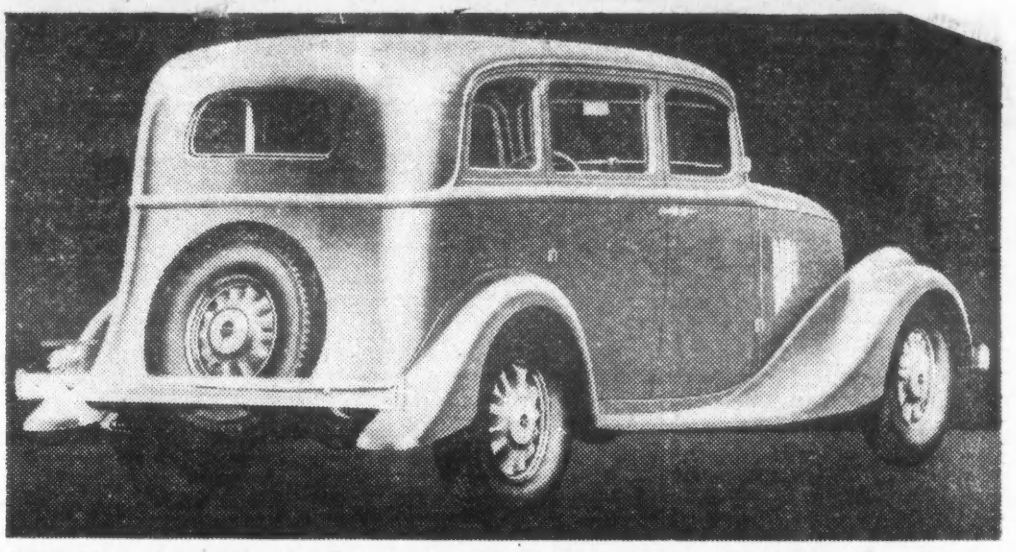
Although chassis embody few strictly new departures, they have many elements that are new to Willys designs and quite new in cars of the lowest price class. Among these is the X-type double-drop frame, full forced feed lubrication and a patented form of floating power, involving what is termed a "trunion of rubber" at the front below the water pump, a second "trunion of rubber" below and to the left of the gearset case and a rubber-mounted torque arm to the right of the engine. This mounting permits of some motion about the neutral axis of the engine.

Engines have nickel-iron cylinder blocks with integral valve tappet guides. Main bearings are of the steel-backed thin-babbitt interchangeable type and receive oil under pressure, as do the connecting rod big ends.

Exhaust valves are of silchrome and seat on ring inserts which, it is claimed, will make adjustment unnecessary during the life of the car, and will do away with the need for valve grinding. Pistons are of cast iron, have four rings and floating pins.

Water circulation is by a pump at the front of the cylinder block and on the inner end of the fan shaft. This pump and the four-blade fan, together with the lighting generator, are included in a triangular drive with V-belt from the crankshaft pulley. The camshaft is driven by a 1¼-inch chain, is mounted in four bearings, and has a gear at the center for driving an inclined pump and timer shaft. The pump draws oil from a Float-O strainer which floats on top of the oil in the crankcase. As a result, clean oil free from sediment and water is pumped to bearings and danger of a frozen supply avoided.

Bolted to the rear of the engine is a one-piece casting comprising the bell housing and gearset case. The latter has provision for the rear mounting of the power unit with surfaces that bear horizontally and at 45 degrees against rubber blocks which are carried in a built-up box-type stamping. The latter forms a cross-member that ties the two forward legs of the X-bracing together and to the frame side rails. This stamping is also extended at each end to support the forward ends of the steel running boards. The torque arm's outer end rests in a rubber block carried on a bracket on the right forward leg of the X-member, opposite the forward end of the gearset case. Clutch and gearset are of conventional form, that in the six having helical gears with synchronizing control and a Warner free-wheeling unit in a separate compartment. The clutch is a single-plate type with springs to damp torsional vibrations.

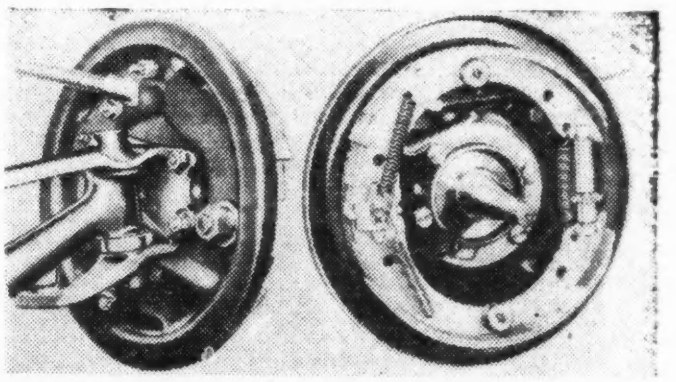


REAR VIEW of the Willys 77 Sedan, Showing How the Spare Wheel Is Recessed Into the Outwardly Swept Rear Panel.

A single cross-shaft running below the gearset supports the clutch and brake pedals independent of the floating power plant. The clutch pedal is connected to the clutch control lever by a flexible lever, which is not affected by and does not restrain motion of the engine in its flexible supports. The battery cradle is in the triangle formed by the right legs of the X-member of the frame, and the muffler is below the left triangle. Universal Products Company universal joints are provided at each end of the hollow propeller shaft, which passes through the box formed by webs joining the center sections of the X-type frame members. The latter are joined to the side rails near the hangers for the front ends of the rear springs and the rear ends of front springs. Diagonal braces run from the center of the front cross-member to the side members and thence back to overlap slightly the forward ends of the X-members, forming a box section with the side rails where the latter are subjected to torsional stresses.

Rear axles are semi-floating types with straddle-mounted pinion gears, carried in a one-piece third-member casting with provision for shim adjustment of the ring gear. Tube extensions, which are recessed into the casting, are welded at six points and are flanged at the outer ends to take the brake anchorages and cover plates. Spring perches are welded in place.

The front axles are of convetional reverse Elliott type, with I section at center and circular section from the spring perches outward. King pins are given a 7½ degree outward tilt and are provided with roller thrust bearings. Steering arms are forged integral with the kunckle and with a flange which bolts to the brake anchorage and cover plate. Timken taper roller bearings are used on front axle spindles. A straight drag link is employed. The steering gear is a worm-and-sector type, mounted on top of the frame. A three-spoke steering wheel is mounted on a column, the angle of which can be varied to suit the driver.



FRONT axle end and Front-Wheel Bendix Brakes on New Willys 77 Chassis

Brakes are Bendix cable and conduit type, and operate on 9-inch drums. Two shoes are used and are provided with 1¾x⅜-inch lining of the molded type. The hand brake is at the left of the clutch pedal and passes through the floor to a point where it is reached with the left hand.

Cellular Fedders radiators are fitted and are covered with a grill which supports the front end of the hood and forms a splash apron below, so that no separate splash apron is needed. The electric system is entirely Auto Lite, ignition units included. Fuel is fed by an A. C. pump to the Tillotson down-draft carburetor fitted with a Monroe combined air cleaner and intake silencer on the model 99, and an A. C. unit on the model 77. A thermostat controls water circulation in the six. The radiator filler neck is under the hood at the right side, the same side on which the oil filler is placed.

Bodies are of the all-steel type. Back panels, besides being recessed to carry the spare wheel, are swept outward to cover the fuel tank and springs, and at the top are carried forward some 18 inches to form part of the roof. Body models in both the 77 and 99 include a four-door sedan, two-passenger coupe and a four-passenger coupe. A custom sedan on the 99 chassis seats five, but other sedans seat only four persons.

Body fronts comprise two main parts, the forward one including the cowl, dash, a part of the windshield frame and top bar, and the rear one including the instrument panel, rear half of windshield frame and interior sections of the windshield pillars. These sections are welded together to form a rigid assembly. The windshield itself has two concealed hinges at the top and a latch which either locks the windshield or holds it in an open position. At the left of the instrument panel are two dials, one for the speedometer and the other for a combined gasoline and oil gauge. There are also choke and hand throttle controls. Light switches are under the edge of the

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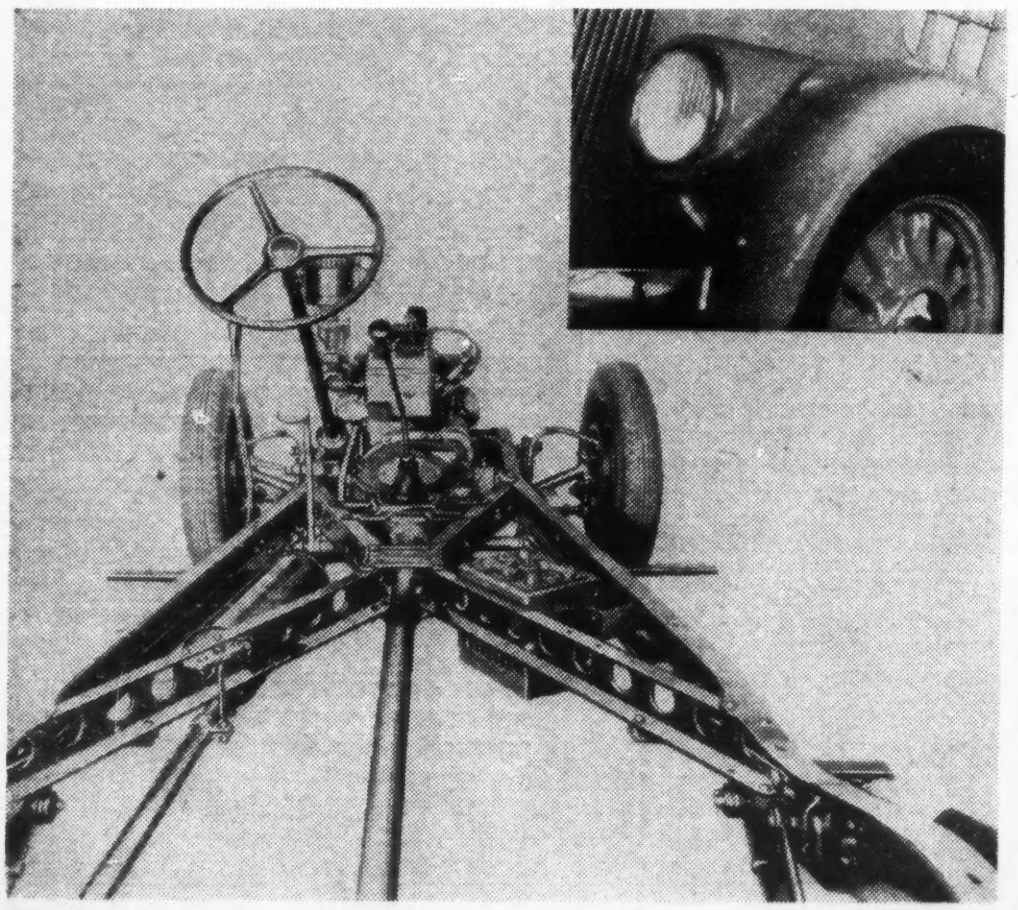
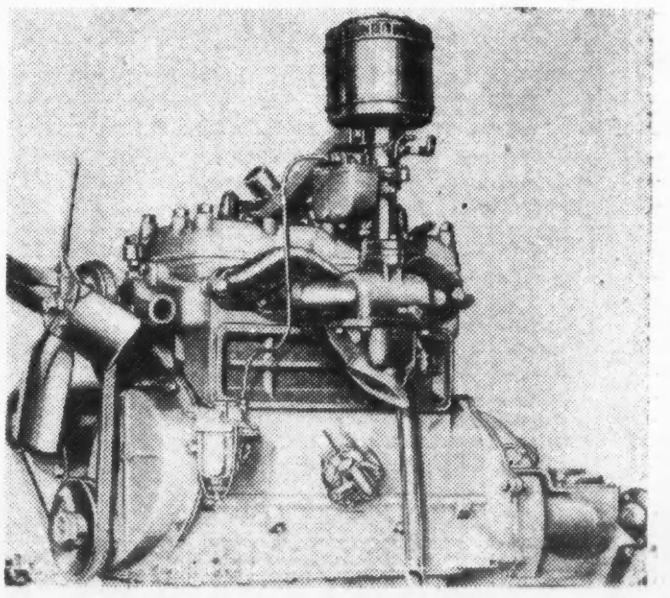


WILLYS Four-Cylinder 77 Chassis, Showing X-Type Frame and, in Insert, the Fender Headlamps and Disk Wheels



Air Cleaner and Carburetor, Willys 77

NEW PASSENGER CAR REGISTRATIONS FOR FIRST

Make of Car	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Mass'setts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska
Auburn Group	59	9	16	1168	142	195	7	122	43	28	1055	398	96	100	120	65	31	238	470	306	132	3	479	26	46
Auburn	59	9	16	1143	139	194	7	118	42	27	1028	378	93	97	118	64	30	235	465	300	130	3	469	24	46
Cord				25	3	1		4	1	1	27	20	3	3	2	1	1	3	5	6	2		10	2	
Chrysler Group	982	338	764	12466	1716	3516	375	1761	1576	300	11837	5543	2395	1817	2383	1046	1073	2341	7743	8480	3617	366	6527	589	1122
Chrysler	178	25	86	1910	247	432	90	278	260	33	1683	619	278	185	335	97	103	366	1014	1098	577	52	649	85	171
De Soto	79	71	48	2318	96	492	41	109	115	34	1890	1156	208	226	279	119	70	328	662	1508	286	35	1055	70	60
Dodge	130	74	203	2131	291	428	23	193	309	59	1772	810	509	311	396	321	173	348	1085	1126	428	63	1008	85	199
Plymouth	595	168	427	6107	1082	2164	221	1181	892	174	6492	2958	1400	1095	1373	509	727	1299	4982	4748	2326	216	3815	349	692
Ford Group	2249	665	2424	18841	2488	2818	743	3562	4027	585	12000	6354	4760	3855	3584	3272	1625	3868	11024	19954	5676	1803	8218	997	3374
Ford	2242	661	2418	18514	2474	2776	732	3536	4006	583	11755	6298	4737	3833	3561	3250	1614	3854	10849	19729	5620	1795	8126	995	3354
Lincoln	7	4	6	327	14	42	11	26	21	2	245	56	23	22	23	22	11	14	175	225	56	8	92	2	20
Gen'l Mot. Group	3932	1026	3499	21737	4093	7191	1546	5278	6463	902	24576	11557	8660	6773	5426	4692	3542	8345	20378	19974	11123	3225	17669	1918	5230
Buick	268	153	150	3385	564	1150	204	433	534	76	2526	945	474	399	306	265	417	535	2819	1889	778	97	1296	174	340
Cadillac	19	9	7	557	33	147	26	39	55	4	525	76	29	36	22	53	35	61	239	391	61	1	123	6	19
Chevrolet	3347	728	3155	14348	2965	4287	1030	4209	5244	737	16515	8446	6881	5382	4595	3982	2256	6648	12425	13551	8398	3000	13662	1406	4077
La Salle	7	3	6	348	20	105	15	28	24	1	369	42	20	15	9	14	34	40	261	201	51	2	96	2	18
Oldsmobile	55	58	29	1133	110	388	76	92	184	30	1896	816	371	221	116	140	203	225	1463	1657	660	42	864	60	224
Pontiac	236	75	152	1966	401	1114	195	477	422	54	2745	1232	385	720	378	238	597	836	3171	2285	1175	83	1628	270	552
Hudson Group	106	73	34	1904	337	736	72	419	222	46	1903	1138	726	594	386	86	506	557	2859	3098	600	22	882	116	205
Essex	85	53	29	1324	258	605	59	301	163	29	1411	821	550	422	323	64	400	421	2266	2363	405	18	692	73	139
Hudson	21	20	5	580	79	131	13	118	59	17	492	317	176	172	63	22	106	136	593	735	195	4	190	43	66
Sutdebaker Group	173	128	77	5048	383	807	90	180	481	50	2865	1319	512	452	474	290	399	625	2191	1557	875	135	992	121	338
Pierce-Arrow	1		2	230	24	50	3	16	21		232	28	6	28	12	7	11	38	202	91	22	2	120	5	4
Rockne	84	65	32	2137	140	326	43	69	210	24	806	552	259	217	261	164	202	282	821	761	363	74	330	38	171
Studebaker	88	63	43	2681	219	431	44	95	250	26	1827	739	247	207	201	119	186	305	1168	705	490	59	542	78	163
Willys-Ov'd Group	183	25	33	1095	254	259	47	131	160	37	1785	919	580	429	376	98	140	311	789	695	684	58	1026	98	397
Willys-Overland	168	20	31	700	231	224	45	118	148	28	1585	875	548	395	334	89	121	272	629	636	615	44	907	81	364
Willys-Knight	15	5	2	395	23	35	2	13	12	9	200	44	32	34	42	9	19	39	160	59	69	14	119	17	33
Non-Affili'd Mfrs.																									
De Vaux	2	6	1	280	23	9		7	4	8	92	34	34	3	13	18	9		17	103	4	1	29	11	7
Franklin	2	1	1	66	9	55	4	45	29	1	117	39	3	10	12	13	15	29	124	12	8	1	30	8	4
Graham	15	1	57	1223	97	296	7	168	115	35	909	313	98	91	64	55	82	174	526	803	287	14	418	23	83
Hupmobile	47		21	628	44	142	13	72	138	3	659	190	62	68	90	46	30	113	560	865	231	30	307	10	48
Marmon	1			50	9	21	1	82	24		75	119	4	7	33	4	5	3	47	65	5		86	6	4
Nash	69	71	81	1339	190	419	67	101	129	55	1466	263	217	160	99	290	225	269	1650	425	322	95	552	93	106
Packard	34	20	12	720	57	302	45	77	93	1	880	149	86	36	85	53	88	184	680	469	206	10	211	7	31
Reo	24	2	18	268	25	106	1	34	26	7	218	54	38	21	39	13	36	55	233	320	79		135	12	26
Miscellaneous	89		4	353	45	16	22	712	196	10	225	74	30	32	51	114	5	69	148	77	45	19	113	24	11
State Totals	7967	2365	7042	67186	9912	16888	3040	12751	13726	2068	60662	28463	18301	14448	13235	10155	7811	17181	49439	57203	23894	5782	37674	4059	11032

NEW PASSENGER CAR REGISTRATIONS FOR FIRST

Make of Car	Alabama	Arizona	Arkansas	California	Colorado	Connecticut	Delaware	Florida	Georgia	Idaho	Illinois	Indiana	Iowa	Kansas	Kentucky	Louisiana	Maine	Maryland	Mass'setts	Michigan	Minnesota	Mississippi	Missouri	Montana	Nebraska
Auburn Group	81	36	10	3352	262	634	31	283	124	51	3046	1072	311	141	183	104	124	348	1542	1083	415	7	785	58	115
Auburn	76	35	9	3271	246	619	31	263	111	47	2835	992	297	127	172	92	122	333	1501	1034	398	6	737	54	107
Cord	5	1	1	81	16	15		20	13	4	211	80	14	14	11	12	2	15	41	49	17	1	48	4	8
Chrysler Group	1598	549	1187	15431	1790	4337	428	2173	1840	676	14203	7298	4317	2186	3593	1632	1665	2582	8769	12017	5568	532	5935	979	2241
Chrysler	366	83	213	3337	377	994	200	608	412	116	3152	1232	823	337	788	342	321	634	2144	2038	1247	165	1033	258	435
De Soto	150	103	71	2866	100	847	29	129	165	98	2015	1495	304	196	302	250	130	250	597	1267	370	39	613	139	112
Dodge	290	148	394	3779	562	1124	33	349	569	193	3972	1581	1280	683	919	497	423	491	2345	2746	931	133	1615	215	529
Plymouth	792	215	509	5449	751	1372	166	1087	694	269	5064	2990	1905	970	1584	543	791	1207	3683	5966	3020	195	2674	367	1165
Ford Group	5048	1768	3421	41936	4808	6927	1539	7955	9096	1701	31944	13378	11831	7449	7681	5644	3987	7593	25977	29115	11476	3546	15875	2292	7996
Ford	5042	1763	3417	41587	4793	6872	1528	7923	9066	1698	31600	13324	11796	7434	7657	5622	3976	7560	25786	28930	11432	3541	15788	2289	7975
Lincoln	6	5	4	349	15	55	11	32	30	3	344	54	35	15	24	22	11	33	191	185	44	5	87	3	21
Gen'l Mot. Group	6860	2175	4473	47266	7932	13357	2348	10184	11309	2252	47534	21755	20639	13458	10826	7474	6278	13716	32864	37070	21454	4652	27786	3477	11468
Buick	543	316	215	7196	1028	2080	341	782	938	173	4857	1806	1110	848	476	359	791	1071	4970	3770	1437	201	2041	326	741
Cadillac	27	17	30	1121	55	348	43	68	73	2	904	156	80	52	33	31	69	86	575	623	112	3	183	10	28
Chevrolet	5856	1607	3908	32550	5812	7819	1499	8106	9232	1869	30854	15544	16056	10621	9329	6426	3816	10450	19889	24316	16350	4215	21410	2576	9363
La Salle	22	7	24	517	39	197	36	41	50		703	89	51	32	27	29	58	64	572	270	79	4	141	15	14
Oldsmobile	93	120	68	1925	269	778	126	241	369	68	4143	1688	1080	437	211	200	426	405	2377	3469	1244	43	1329	132	444
Pontiac	319	108	228	3957	729	2135	303	946	647	140	6073	2472	2253	1468	750	429	1118	1640	4481	4622	2232	186	2682	418	878
Hudson Group	133	93	56	2699	600	1381	139	779	403	99	3342	1935	1402	1021	730	268	1175	889	5102	4452	1228	66	1342	262	371
Essex	89	49	41	1458	351	922	94	480	241	53	2305	1367	933	640	548	169	865	638	3782	3137	784	43	997	155	247
Hudson	44	44	15	1241	249	459	45	299	162	46	1037	568	469	381	182	99	310	251	1320	1315	444	23	345	107	124
Pierce-Ar'w Group	257	154	81	5321	448	981	62	313	559	127	3466	1428	728	532	388	387	423	631	2568	1141	1033	181	1149	175	581
Pierce-Arrow	3	3	3	375	37	142	7	31	47		300	44	9	19	22	28	10	53	401	56	60	3	169	6	6
Studebaker	254	151	78	4946	411	839	55	282	512	127	3166	1384	719	513	366	359	413	578	2167	1085	973	178	980	169	575
Willys-Ov'd Group	322	70	119	2555	632	512	86	276	211	149	3009	1750	1723	879	955	155	372	545	1494	1769	1654	104	2425	250	962
Willys-Knight	24	13	9	694	51	104	17	38	24	17	479	118	111	78	92	28	41	81	394	197	168	14	215	27	111
Willys-Overland	298	57	110	1861	581	408	69	238	187	132	2530	1632	1612	801	863	127	331	464	1100	1572	1486	90	2210	223	851
Non-Affili'd Mfrs.																									
*De Vaux	5	26	1	1094	54	98	5	24	23	42	227	61	128	11	43	27	37	6	158	440	41		36	33	22
Franklin	7	3	2	240	11	111	9	58	34	6	230	47	14	17	10	16	36	62	316	13	16	2	50	23	9
Graham	73	6	106	1608	213	450	9	369	171	68	1200	439	268	163	108	86	152	292	658	888	514	38	593	34	164
Hupmobile	94	38	21	1184	89	375	12	129	239	13	1211	417	234	94	222	135	102	279	950	605	556	71	480	54	118
Marmon	45	5		194	68	102	4	86	41	1	365	362	58	66	117	44	38	32	207	227	48	5	359	35	34
Nash	131	164	117	2795	376	854	72	275	298	114	2793	647	573	370	191	442	445	537	2692	786	661	205	1010	152	240
Packard	57	32	11	1209	76	489	80	119	82	10	1430	208	143	61	104	64	118	230	970	617	335	14	310	10	65
Reo	32	6	21	516	50	173	3	80	45	25	405	122	91	90	74	20	66	98	394	433	157	3	153	47	37
Miscellaneous	19	15	28	1772	268	118	73	158	44	65	1035	276	343	191	142	34	52	229	448	477	398	7	525	92	136
State Totals	14762	5140	9654	129172	17677	30899	4900	23261	24519	5399	115440	51195	42793	26729	25367	16532	15070	28069	85109	91133	45554	9433	58813	7973	24559

*Eight months' report.

ELEVEN MONTHS OF 1932 BY GROUPS AND STATES

Make of Car	Nevada	N. Hampshire	New Jersey	New Mexico	New York	No. Carolina	No. Dakota	Ohio	Oklahoma	Oregon	Penn'vania	Rhode Island	So. Carolina	So. Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Dist. of Col.	Line Total	Group Total
Auburn Group	8	38	548	5	2269	113	5	860	102	37	1023	78	43	10	80	246	29	49	108	92	94	258	15	293		11,757
Auburn	8	38	526	5	2149	113	5	841	102	37	1006	78	42	10	80	244	28	49	102	87	89	256	14	290	11429	
Cord			22		120			19			17		1			2	1		6	5	5	2	1	3	328	
Chrysler Group	231	946	8259	238	28597	1792	441	12339	2251	1040	19081	1785	685	636	1619	4213	303	589	2269	2069	1899	3793	287	1654		177,689
Chrysler	50	105	1365	34	4337	332	43	1384	269	169	3172	277	89	95	209	858	11	73	292	335	269	472	63	240	25394	
De Soto	28	111	1048	14	3730	126	26	2456	272	154	2436	321	113	61	153	510	54	47	383	281	265	476	18	291	24630	
Dodge	34	86	1000	57	3371	348	79	1490	572	154	2575	184	134	127	302	823	67	91	448	280	349	557	67	317	25987	
Plymouth	119	644	4846	133	17159	986	293	7009	1138	563	10898	1003	349	353	955	2022	171	378	1146	1173	1016	2288	239	806	101678	
Ford Group	315	1286	8243	725	25187	4791	1178	14162	4316	1641	17303	1387	2128	1651	2949	12732	717	875	6187	2663	2217	5048	532	3103		249,602
Ford	308	1270	8098	724	24480	4774	1176	14016	4294	1617	17088	1365	2124	1049	2935	12669	712	872	6165	2634	2202	5018	532	3047	246581	
Lincoln	7	16	145	1	707	17	2	146	22	24	215	22	4	2	14	63	5	3	22	29	15	30		56	3021	
Gen'l Mot. Group	590	2151	20269	1046	60507	6229	1892	22491	8661	2477	35294	3032	3073	1757	4904	21602	1184	1647	9307	3856	3342	10721	1014	5098		442,000
Buick	112	268	3076	145	10382	334	119	1972	604	290	4409	444	173	108	265	1697	130	234	563	519	234	1101	137	521	48014	
Cadillac	12	11	426	8	1598	27	1	339	64	19	475	45	4	2	31	118	7	7	58	35	24	136	6	74	6100	
Chevrolet	390	1433	12730	798	37114	5197	1585	15683	7008	1837	23626	1889	2643	1353	4242	17993	878	1042	7601	2535	2978	7535	741	3980	314085	
La Salle	7	10	233	2	695	24		191	23	9	408	48	7	7	25	83	4	9	26	24	19	71	1	21	3678	
Oldsmobile	23	127	1374	21	4238	170	69	1396	172	118	2117	114	57	149	129	319	57	110	171	300	144	654	53	356	23551	
Pontiac	46	302	2430	72	6480	477	118	2910	790	204	4259	492	189	138	212	1392	108	245	883	443	443	1224	76	746	46572	
Hudson Group	20	233	1655	20	5251	453	42	2489	165	135	3248	344	166	64	250	533	137	263	620	297	372	1005	105	407		35,901
Essex	5	189	1248	13	4016	356	32	2018	122	88	2534	281	126	49	213	411	101	213	500	192	303	773	90	333	27480	
Hudson	15	44	407	7	1235	97	10	471	43	47	714	63	40	15	37	122	36	50	120	105	69	232	15	74	8421	
Studebaker Group	65	252	2460	44	8124	222	109	2151	308	258	3305	326	73	178	327	1250	91	146	383	616	297	1004	73	489		43,113
Pierce-Arrow	1	3	287	1	610	10		81	24	8	185	46		1	13	68	1	5	23	9	5	44	3	29	2612	
Rockne	18	133	858	24	1790	117	68	963	121	88	1278	152	45	98	156	612	39	86	159	269	177	346	25	125	16178	
Studebaker	46	116	1315	19	5724	95	41	1107	163	162	1842	128	28	79	158	570	51	55	201	338	115	614	45	335	24323	
Willys-Ov'd Group	12	102	1155	18	4051	150	171	2105	208	142	3135	177	40	82	218	453	22	167	322	244	355	911	31	136		25,016
Willys-Overland	12	90	817	14	3268	145	161	1848	199	99	2840	159	39	70	204	422	19	156	301	200	329	834	29	116	21660	
Willys-Knight		12	338	4	783	5	10	257	9	43	295	18	1	12	14	31	3	11	21	44	26	77	2	20	3356	
Non-Affili'd Mfrs.																										
De Vaux	3	3	48		122	20	5	68	10	15	104	5		11	18	22	11	2	4	23	11	74	2	7	1303	
Franklin	3	18	89		442	2		116	11	11	211	34	1		13	38	4	4	10	33	6	6		18	1708	
Graham	13	86	556	7	1888	28	18	818	51	132	1250	96	11	26	93	307	65	53	185	163	156	299	14	178	12447	
Hupmobile	3	19	461		1570	24	13	772	51	12	1794	80	49	33	78	171	23	38	161	75	47	270	19	149	10329	
Marmon		5	76	2	353	2	3	59	3	2	137	3	1	1	2	8	2		11	2	5	7		5	1340	
Nash	21	194	1096	21	3916	45	48	955	104	198	1837	167	17	39	112	248	65	80	189	315	142	805	42	294	19703	
Packard	22	39	758	10	2394	50	3	555	102	40	1033	71	19	6	65	151	34	45	113	91	82	186	8	223	10636	
Reo	2	22	180	2	721	5	3	212	25	25	345	42	8	2	15	102	7	7	21	51	39	66	5	14	3710	
Miscellaneous	1	4	192	10	423	190	6	145	18	23	314	35	83	11	84	67	5	8	42	66	18	135	3	24	4391	
State Totals	1309	5398	46045	2148	145815	14116	3937	60297	16386	6188	89414	7662	6397	3907	10827	42143	2699	3973	19932	10656	9582	24588	2250	12692	1050645	

ELEVEN MONTHS OF 1931 BY GROUPS AND STATES

Make of Car	Nevada	N. Hampshire	New Jersey	New Mexico	New York	No. Carolina	No. Dakota	Ohio	Oklahoma	Oregon	Penn'vania	Rhode Island	So. Carolina	So. Dakota	Tennessee	Texas	Utah	Vermont	Virginia	Washington	West Virginia	Wisconsin	Wyoming	Dist. of Col.	Line Totals	Group Totals
Auburn Group	45	88	1865	4	5905	189	31	2231	121	140	2732	302	61	31	168	228	56	87	212	219	257	763	20	324		30,277
Auburn	41	88	1805	4	5654	182	30	2133	111	129	2655	296	58	29	166	199	53	86	203	203	244	725	19	314	28942	
Cord	4		60		251	7	1	98	10	11	77	6	3	2	2	29	3	1	9	16	13	38	1	10	1335	
Chrysler Group	353	1035	8815	337	29058	2931	664	14330	2242	1572	21786	2184	1211	1243	2107	6628	437	903	3471	2909	2722	5531	512	2320		218,887
Chrysler	139	204	2917	87	8938	745	143	2907	417	388	5608	577	290	251	321	1567	92	192	744	595	614	1097	115	445	51051	
De Soto	40	102	838	22	3635	193	27	2333	119	279	2588	489	177	121	196	934	68	82	547	537	219	645	13	342	27183	
Dodge	74	186	1993	136	5562	754	181	2493	971	339	4600	440	252	372	596	1776	182	199	853	546	701	1587	190	628	51412	
Plymouth	100	543	3067	152	10923	1239	313	6597	735	566	8992	678	492	499	994	2351	95	430	1327	1231	1188	2202	194	905	89241	
Ford Group	711	2848	19022	1151	53487	9849	2241	28302	6671	4171	32261	3205	4916	2501	7228	21782	1672	1673	12219	5643	5075	10474	1049	7576		515,710
Ford	703	2829	13861	1147	52677	9833	2232	28145	6648	4151	32000	3173	4913	2499	7205	21723	1667	1670	12200	5626	5057	10431	1044	7532	512365	
Lincoln	8	19	161	4	810	16	9	157	23	20	261	32	3	2	23	59	5	3	19	17	18	43	5	44	3345	
Gen'l Mot. Group	884	4100	35239	1822	94042	11526	3508	41683	11943	5826	59446	5396	6637	4276	10412	32501	2442	2437	16367	7648	7258	20640	1702	9132		785,465
Buick	108	444	5399	286	15288	725	215	3188	987	580	7395	804	340	255	574	2852	249	368	980	1004	437	1932	182	899	83907	
Cadillac	12	35	828	15	2575	51	3	504	95	45	888	96	10	4	43	212	25	23	70	69	46	160	10	104	10652	
Chevrolet	665	2673	21855	1370	57281	9492	2801	28745	9628	4430	39646	3372	5737	3272	8979	26920	1888	1490	13209	5102	5400	14295	1316	6419	555458	
La Salle	13	29	479	6	1343	37	2	294	36	27	684	92	16	2	36	131	11	29	38	27	34	109	2	69	6627	
Oldsmobile	31	345	2747	57	7252	328	119	3138	207	255	4038	168	136	442	319	570	85	182	397	591	331	1362	93	612	45490	
Pontiac	55	574	3931	88	10303	893	368	5814	990	489	6795	864	398	301	461	1816	184	345	1673	855	1010	2782	99	1029	83331	
Hudson Group	78	464	2946	35	8477	741	101	3897	255	252	5394	531	287	163	369	837	266	492	1034	474	524	1766	176	478		60,004
Essex	47	330	1971	14	5925	511	63	2859	132	140	3874	399	184	110	276	523	150	345	743	310	377	1236	134	362	41403	
Hudson	31	134	975	21	2552	230	38	1038	123	112	1520	132	103	53	93	314	116	147	291	164	147	530	42	116	18601	
Pierce-Ar'w Group	105	257	2989	51	8319	214	136	2524	330	396	3647	417	116	207	506	1576	139	112	506	794	276	1312	90	545		48,678
Pierce-Arrow	2	16	419	4	887	18		200	46	31	349	85	5	1	25	144	4	10	45	31	9	80	3	55	4303	
Studebaker	103	241	2570	47	7432	196	136	2324	284	365	3298	332	111	206	481	1432	135	102	461	763	267	1232	87	490	44375	
Willys-Ov'd Group	22	304	1898	79	7190	285	394	4824	323	188	4659	277	65	318	426	925	97	283	508	648	794	1434	73	280		49,272
Willys-Knight	5	41	647	13	1789	20	23	774	55	45	782	59	5	19	33	119	15	20	56	139	74	156	10	68	8112	
Willys-Overland	17	263	1251	66	5401	265	371	4050	268	143	3877	218	60	299	393	806	82	263	452	509	720	1278	63	212	41160	
Non-Affili'd Mfrs.																										
*De Vaux	12	22	269	1	409	53	22	146	11	79	339	16	17	44	70	17	50	6	15	84	45	206	6	1	4582	
Franklin	4	44	238	3	814	15		221	29	42	462	53	6	1	22	62	16	6	7	38	14	37	2	31	3509	
Graham	27	91	784	10	2610	110	61	1069	89	315	2060	156	29	41	185	540	134	44	206	226	264	486	12	305	18524	
Hupmobile	16	86	941	2	2710	52	23	1066	77	47	1720	158	92	98	164	409	59	87	332	270	121	292	43	265	16852	
Marmon	5	23	390	7	703	19	22	507	16	29	695	9	2	6	15	121	14	3	81	20	50	105	3	67	5455	
Nash	26	308	2727	50	7225	116	105	1885	176	287	3348	324	52	100	206	709	155	188	312	293	272	1660	93	402	37959	
Packard	18	80	1187	7	3217	70	3	786	125	62	1602	104	34	23	87	281	29	54	185	165	111	258	5	289	15566	
Reo	5	30	343	7	1089	17	14	354	39	66	408	146	23	9	34	243	24	23	44	104	88	141	13	25	6430	
Miscellaneous	14	47	710	43	1359	84	44	949	118	227	1085	89	37	86	75	351	47	25	129	292	67	278	7	186	13293	
State Totals	2325	9827	80363	3669	226614	26271	7369	104774	22565	13699	141644	13367	13585	9147	22074	67210	5637	6423	35628	19767	17938	45383	3806	22226	1830463	

Floating Power Engine Mounting on New Willys

(Continued from Page 5)

panel, and a foot-operated dimmer switch is placed to the left of the clutch. There is a glove compartment at the right of the panel.

Front seats in sedans are individual adjustable types. Custom sedans have a cord control for the rear window curtain which is carried forward under the trim to the driver's seat. Body equipment includes a windshield cleaner, interior visors, cowl ventilator and, in the sedans, a dome light.

Despite their mounting in the fenders, headlamps are readily adjustable by screws located in the flange of the lamp. A spring mounting is provided to prolong the life of lamp filaments. Chassis equipment includes front and rear hydraulic shock eliminators, a gasoline filter and, on the six, a Startix.

With these two new models John N. Willys, as chairman of the board, expects to make a determined bid for a large share of the business in the low-priced field.

N. A. C. C. MEETING TO HEAR TALKS ON FOREIGN MARKETS

(Continued from Page 1)

Export Corporation—"Market Conditions in Asia and Australia."

Allen C. Germann, export manager, Hudson Motor Car Company—"Africa's Automotive Situation."

Plans for expanding the industry's export operations will be considered at the second section of the meeting. Speakers announced are:

David Elmore, chairman, N. A. C. C. export rate committee—"Shipping Trends in 1933."

A. C. Peters, export sales executive—"Export Payments."

George Quisenberry, editor, The American Automobile — "Foreign Trade Aid Through the Reconstruction Finance Corporation."

Edgar W. Smith, assistant to president, General Motors Export Company—"Legislative Solutions Here and Abroad."

B. C. Budd, export manager, Packard Motors Export Company—"Acquiring and Maintaining Dealers."

The session will be concluded with a general discussion of immediate plans for expanding the industry's export operations.

TRUCK AND AVIATION GROUPS WILL MEET

Springfield, Mass., Jan. 4.—The Traffic Club of Springfield will hold its winter banquet and meeting January 17 at the Hotel Bridgway. This will be known as motor truck and aviation night, and it will be the first time that the local club has had either group present its views before its members.

The guest speakers will include Harry Sandager of Cranston, R. I., who is a member of the state judiciary committee and also state representative; Zentford D. Granville of this city and James G. Williams, manager of the General Air Express Company of Hartford, Conn.

The motor truck agencies of the club are planning an elaborate program, both in advertising and decoration effects. The committee on advertising includes J. Center and W. Roach.

BROWN INSTRUMENT PROMOTES N. E. CHANCE

Philadelphia, Jan. 4.—Nelson E. Chance, formerly district manager of the Houston office of the Brown Instrument Company, has been appointed assistant sales manager, with headquarters at Philadelphia. Mr. Chance has been with the company over ten years and for seven years was manager of the district comprising Texas, Louisiana and southern Arkansas.

STUDEBAKER TRUCKS

South Bend, Ind., Jan. 4.—New commercial car dealers appointed by the Studebaker Corporation are announced as follows: V. P. Motors, Danville, Ill.; White-Indiana Sales Company, Tulsa, Okla.; L. A. McKean Auto Company, Sioux Falls, S. D.

HOFFMAN DISCOVERS TRAFFIC SIGNALS NO CURE FOR ACCIDENTS

Trenton, N. J., Jan. 4.—Studies conducted by the Bureau of Traffic Control and Regulation have convinced Commissioner Hoffman of the Motor Vehicle Department that traffic control signals are not an omnibus panacea for traffic difficulties, notwithstanding general public opinion to the contrary.

Adequate and sufficient engineering surveys, Hoffman thinks, should be made at all points where control signals are now in operation, or where it is proposed to erect such signals, to determine their usefulness. The surveys, he holds, should include the collection of factual data which would enable an honest determination of the need of signals.

It is difficult, Hoffman said today, to convince the citizen or group of citizens, and sometimes officials, who request a signal, that neither traffic at the intersection involved nor accident experience justifies the installation. The usual answer Hoffman finds is: "Our corner needs a light."

A typical survey was made by the bureau in Trenton for fifty-five intersections where signals were placed in operation two years ago. Analysis of the accident experience at these locations one year prior to and one year after installation of the signals developed some unexpected results.

The survey indicated that although the number of accidents of all types was decreased 28 per cent. at the fifty-five intersections, there was not only a large increase in accidents of certain types, but also an increase in accidents at individual intersections after signalization.

As an example, one 56 per cent. of the intersections showed a decrease. Slightly more than 29 per cent. had an increase, while uearly 15 per cent. showed no change in accident experience. The analysis showed that by grouping intersections by numbers of accidents for the year prior to installing the signals, those intersections having a low accident experience before signals were installed had a general increase of 70 per cent. in all types of accidents.

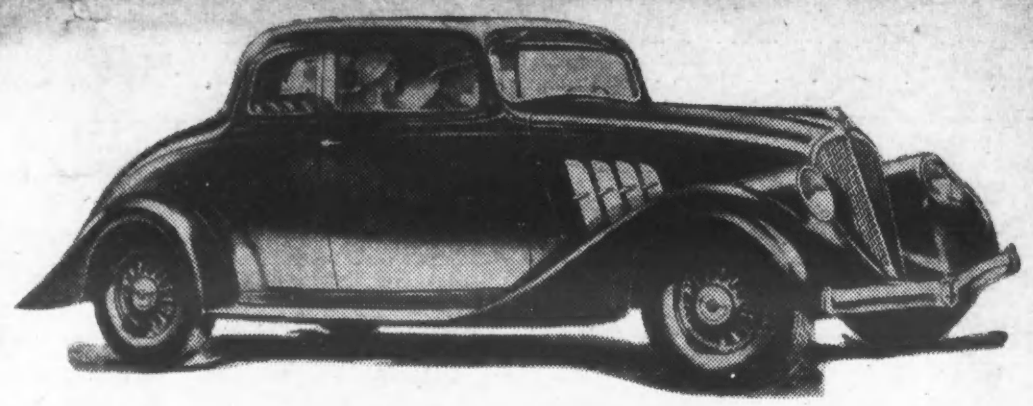
Supporting the view that the subject should be studied intelligently, Hoffman said traffic control signals, properly installed, not only perform a highly efficient service with great regularity in alternating the flow of traffic streams, but also, as a whole, increase the safety at such points. On the other hand, unnecessary control signals not only create needless stopping and delay and an increase in the accident hazard at such points, but also to some extent create a strong presumption on the part of the motorist and pedestrian against their commands, causing a disregard of their warning.

ABBOTT IS HEARD BY 300 AT HUDSON-ESSEX RALLY

Philadelphia, Jan. 3.—Chester G. Abbott, vice-president and general sales manager of the Hudson Motor Company, addressed an enthusiastic sales meeting of some 300 Hudson-Essex dealers and their salesmen from the various territorial points in the Philadelphia distributing area. The distributor, the Gomery-Schwartz Motor Car Company, was well represented at the session. Potential markets for the product within specified price ranges were analyzed, sales policies for 1933 were outlined, and the talk was enlightened by slide-films.

KELLY-SPRINGFIELD PLANS INTENSIVE SALES CAMPAIGN

New York, Jan. 4.—Kelly-Springfield Tire Company has completed plans for 1933 for the most comprehensive sales campaign ever undertaken by the company, says William H. Lalley, president. The main feature of the campaign, Mr. Lalley adds, will be an aggressive newspaper advertising program to be launched early in the new year.



COUPE BODY on the New Willys 99 Chassis

AUSTRALIA WANTS PRIVATE OPERATION OF BUS TRANSPORT

Washington, Jan. 4.—A public utility company to operate the transportation systems of Sydney and Newcastle, Australia, is proposed in the recently published report of the Transport Advisory Committee of New South Wales, according to a report from Trade Commissioner J. E. Peebles, Sydney.

Alternative to this method, the committee proposed that the government should run the systems, or that a public utility transport corporation, with two government members on the board of five directors, be established. The committee did not recommend government purchase of the existing systems, however.

Failing a utility transport company, the committee recommended that a public utility transport corporation should be formed and given a franchise to handle exclusively all omnibus transport in the metropolitan area. Such a corporation, it is suggested, should have a board of five directors, two members appointed by the government, one of whom would represent the minister of transport, and the other an independent director, whose principal obligation would be to watch the interests of the municipalities, the general public and the employees.

ILLINOIS TRUCK REGISTRATIONS UP 44% IN DECEMBER

(Continued from Page 1)

As compared with the total for December, 1931, the Illinois registrations showed a decline of about 40 per cent., the actual figures being: 2,389 units in December, 1931, as against 1,432 for last year.

FILES BILL TO ABOLISH MASS. ZONING SYSTEM

Boston, Mass., Jan. 4.—Representative Charles T. Cavanagh of Cambridge today filed with the clerk of the House a bill to abolish the zoning system of apportioning the compulsory automobile insurance.

The measure provides "that classification of risks and premium charges under the compulsory motor vehicle liability insurance law shall be uniform throughout the commonwealth."

According to Representative Cavanagh, the petition for this legislation was signed by 50,000 automobile owners throughout the commonwealth. The signatures were collected by the Massachusetts Automobile Owners' Association.

WHOLESALE FORCE LEADS THORNTON-FULLER SALES

Philadelphia, Jan. 4.—The wholesale department of the Thornton-Fuller Automobile Company, Dodge distributor, won first prize, and the service department second prize, in a ten-months' contest for business, which ended in December, the various selling departments being entered. Each department was given a quota to attain, based on the average of the previous ten months. Each of the prize winning departments exceeded its own quota. The awards were made by George H. Thornton, general manager, at festivities in the Penn Athletic Club, at which 200 Thornton-Fuller employees were present.

CHICAGO A. T. A. REPORTS PROGRESS IN CAMPAIGN

Chicago, Jan. 4.—A feature of the Chicago Automobile Trade Association service to members that is proving effective is its campaign among insurance companies with the objective of inducing such firms to give wreck, repair, strip and salvage jobs to members of the trade body, it was learned today.

The advantages of the plan, as pointed out by the trade association officials, are threefold.

In the first place, it is stated that the loss sustained by both owner and insurance company is reduced by reason of the lower cost of turning out accurate and satisfactory work when performed by the dealer member.

Secondly, it is declared that the program reduces thefts, with their attendant stripping of parts and accessories, through closing the market to stolen parts.

The third point stressed is that the placing of various types of service work by the insurance companies with the dealer members assures greater facility, smoothness and orderly handling of such jobs through this mutual agreement.

Progress made with this plan of the Chicago Automobile Trade Association is taken as an indication that the insurance companies are becoming increasingly impressed with the advantages of the program.

WHITE REPORTS SALES GAIN IN DECEMBER

Cleveland, O., Jan. 4.—The White Motor Company reported yesterday that it had sold more trucks in December than in any other month since June, when it received a contract from the Post Office Department.

The total last month was 181. In June 548 trucks were sold, including 437 to the Post Office Department.

EMIL HOKANSON

Milwaukee, Wis., Jan. 4.—Emil Hokanson, 50, one of the leading automobile dealers of Milwaukee, died December 30 in a Waukesha hospital from burns and injuries sustained when his automobile left the road near that city the evening before. Mr. Hokanson started in the automobile business in Madison in 1905 with his brother, Rudolf. He is survived by his wife, two sons and his brother.

Mr. Hokanson was president of Hokanson-Thompson, Inc., local automobile distributors, which firm was taken over December 27 by the Braemer Sales Corporation, a new organization. The Braemer organization, a subsidiary of the Hudson Motor Company, has leased the Hokanson-Thompson Building here and will continue the sale and servicing of Hudson and Essex automobiles, it is announced by William M. Thompson, secretary-treasurer of the firm.

CALLS NEW HIGH-SOLID LACQUERS IMPORTANT

Asked to state his views as to important developments in finishing materials in 1932, William H. Hogben, sales manager of the Ditzler Color Company, put the improvements resulting in what is termed "high-solid" lacquers in first place. He outlined his views as follows:

We consider the most important development in finishing materials for the year the successful formulation of a true high-solid type of lacquer enamel. This is in comparison with the so-called high-solid types of materials formerly furnished, which were for the most part high-pigment types of enamels. We consider our VVL high-solid lacquers and our synthetic wheel and chassis materials as the most promising of our new type of finishes.

Our VVL high-solid lacquers differ from materials formerly used in that they contain a greater percentage of film-forming material, which will permit application in fewer coats. They show better workability and ease of finishing. The high luster and durability are a distinct improvement. These advantages can be obtained at less cost per job.

Synthetic wheel and chassis materials permit more rapid finishing than was formerly possible and give a finish that is equal in every respect to the finish formerly used and at the same time giving somewhat better durability.

Although we make a pearl essence type of finish, we do not recommend them. Our polychromatic finish is of a similar type, however, and as to workability and durability gives complete satisfaction and provides a beautiful finish. At the present time there is considerable demand for this material and the cost of same is not greater than the standard finishes.

We recommend our air dry synthetic type materials for wood wheels and other exposed parts. A force dry system is possible, but there is very little demand at the present time.

Our oil-base primers bake from fifty minutes at 200 degrees up to two and one-quarter hours at 225 degrees. Surfacers are baked from one hour at 200 degrees up to one and three-quarter hours at 225 degrees. Synthetic enamels for chassis are usually allowed to air-dry for ten to fifteen minutes before handling. Synthetic wheel materials are baked from one and one-half hours at 250 degrees to four hours at 140 degrees for each coat. Lacquer schedules have remained very much the same.

Chassis materials in colors are largely synthetic. We expect them to continue so inasmuch as we get rapid drying, pleasing appearance and sufficient durability. Fenders at the present time are being finished in black baking enamel or lacquer. Synthetics have not proven entirely satisfactory, owing to difficulties of repairing. It is not unlikely that synthetics will be used for this type of work exclusively some time in the future, but at the present time no one seems to have an entirely satisfactory material.

At the present time the most popular type of refinishing materials for automotive use are lacquer enamels. For truck and fleet work synthetic enamels of the rapid-drying type are being very successfully used.